



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,912	07/21/2006	Anne Dalager Dyrli	P18227USPC	1356
29078	7590	12/11/2007	EXAMINER [REDACTED]	HEALY, BRIAN
CHRISTIAN D. ABEL ONSAGERS AS POSTBOKS 6963 ST. OLAVS PLASS NORWAY, N-0130 NORWAY			ART UNIT [REDACTED]	PAPER NUMBER 2883
			MAIL DATE 12/11/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/553,912	DYRLI ET AL.	
	Examiner	Art Unit	
	BRIAN M. HEALY	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 1-4 is/are allowed.
- 6) Claim(s) _____ is/are rejected.
- 7) Claim(s) 5-9 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20051021</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

Claims 5-9 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must be written in the alternative only and must not depend upon another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Allowable Subject Matter

2. Claims 1-4 are allowed. The closest prior art of record, i.e. Clikeman et. al., U.S.P. No. 5,976,405 teaches (Figs.1-9) a method of microencapsulating liquid crystal materials by forming a polymer encased liquid crystal/particle filled material which is used to form liquid crystal displays. Albert et. al., U.S.P. No. 6,515,649 teaches (Figs.1-13C and Example 1) a method of forming a liquid crystal display using microencapsulation of liquid crystal materials in both oily and aqueous phases to form an emulsion and can include polymerizable particles.

3.

4. Neither Clikeman et. al. or Albert et. al. (either taken single or in combination) teaches or suggests the claimed method of encapsulating liquid crystal materials in a polymeric spherical shell with a narrow size distribution including the steps of: preparing

an aqueous emulsion with a narrow size distribution of an oily phase containing a polymer forming material and an initiator material wherein the oily phase is homogenized in a hydrophilic phase in which the oily material is more soluble than in water, but sufficiently insoluble to form an emulsion to form an emulsion by homogenization, stabilizing the emulsion by diluting the aqueous phase by addition of a high portion of water and polymerizing the polymer forming material to form polymer particles with a narrow size distribution wherein a liquid crystal material is dissolved into the oily phase during the preparation of the aqueous emulsion in a sufficient amount to form one or several separate phase(s) of the liquid crystal within the polymer forming material during polymerization, such that the one or more liquid crystal phase(s) becomes encapsulated inside the spherical polymeric particle being formed. These limitations are recited in claim 1. Dependent claims 2-4 are inclusive of the limitations of claim 1 along with other additional limitations (See the dependent claims for the specifics of these additional limitations.).

5.

6. A copy of PTO-1449 will be included with this office action.

7.

8. The following references are also cited by the Examiner as being pertinent and/or related art: Ju et. al., U.S. Patent Application Publication No. US 2003/0129247A1 (Figs. 1-4), Holman et. al., U.S. Patent Application Publication No. US 2003/0025855A1 (Figs. 1-15), Albert et. al., U.S.P. No. 6,262,706 (Figs. 1-13C) and Albert et. al., U.S.P. No. 6,249,271 (Figs. 1-13C).

Art Unit: 2883

9.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN M. HEALY whose telephone number is (571)272-2347. The examiner can normally be reached on M-F 6AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571)272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BRIAN M. HEALY

PRIMARY EXAMINER

ART UNIT: 2883

PHONE: (571)272-2347



BRIAN HEALY
PRIMARY PATENT EXAMINER
